

REMARKS

In paragraph 3 of the Action, claim 1 was objected to. In paragraph 5 of the Action, claims 1-7 were rejected under 35 U.S.C. 102(b) as being anticipated by Toro-Lira.

In view of the objection and rejection, claims 1, 2 and 4 have been amended, and new claim 8 has been filed. No new matter is introduced in the amendment.

As clearly recited in amended claim 1, a TFT array inspection apparatus for inspecting a TFT array comprises irradiating means, scanning means, defect detecting means and defect analyzing means. The irradiating means irradiates an electron beam on the TFT array including a specific pixel and a specific site on a TFT substrate to obtain a secondary electron signal. The scanning means scans the electron beam on the TFT substrate to obtain a scanning signal.

In the invention, the defect detecting means detects a defective site on the TFT substrate according to the scanning signal, and the defect analyzing means analyzes at least one of a type and an extent of a defect in the defective site based on a change in a waveform of the secondary electron signal and a driving state of the TFT array. The defect analyzing means analyzes the defective site based on the change in the waveform of the secondary electron signal obtained from the electron beam irradiated by the irradiating means and the driving state of the TFT array.

Namely, in the invention, at first, the defect detecting means detects the defective site, and the defect analyzing means only analyzes the defective site. Since the entire TFT substrate is not analyzed in detail, analyzing time can be saved.

In claim 2, it is clearly recited that the defect analyzing means analyzes the defective site in detail after the defect detecting means detects the defective site by scanning the entire TFT array.

In paragraph 5 of the Action, it was held that Toro-Lira discloses "defect analyzing means (74) for analyzing a defect of at least one of the specific pickle and the specific site (79).." (page 3, lines 1-2). Also, it was held in the Action that Toro-Lira discloses "defect detecting means (74) for detecting defective site the TFT substrate (61).." (page 3, lines 7-8).

In view of the rejection, as explained above, it was deemed that the circuit 74 in Toro-Lira operates as the defect analyzing means and the defect detecting means of the invention.

In Toro-Lira, however, it is explained that "The output of electron detector 66, representative of the voltage of the pixel under test, is provided to circuit 74 for analysis. The analysis relies on the each pixel's response, as indicated by its E-beam detected voltage.." (paragraph 4, lines 39-42).

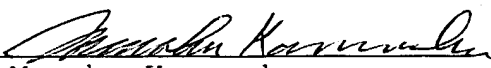
In view of the explanation of Toro-Lira as stated above, Toro-Lira includes the defect detecting means, but the defect analyzing means of the invention is not disclosed. The circuit 74 of Toro-Lira does not have functions of both defect detecting means and the defect analyzing means of the invention.

A rejection based on 35 U.S.C. 102 requires every element of the claim to be included in the reference, either directly or inherently.

However, Toro-Lira does not have the defect analyzing means of the invention. Therefore, claim 1 is not anticipated by Toro-Lira.

Reconsideration and allowance are earnestly solicited.

Respectfully Submitted,

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